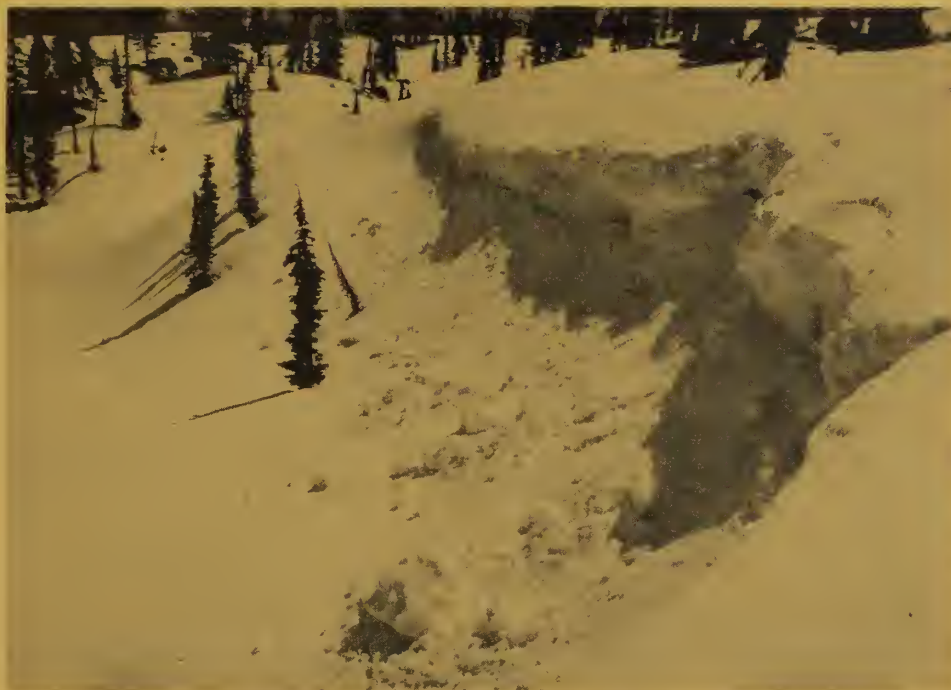


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"Western Treasure -- Deep, Wet Snow"

FEDERAL-STATE COOPERATIVE
SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR OREGON

FEBRUARY 1, 1948

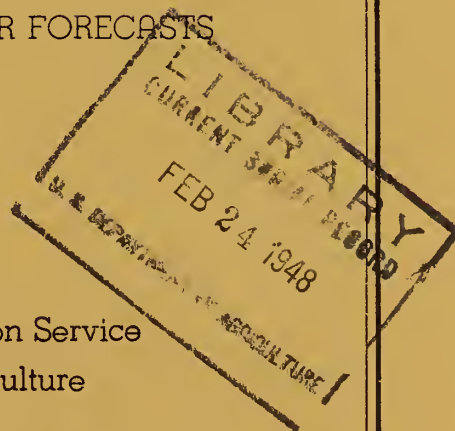
By

Division of Irrigation, Soil Conservation Service

United States Department of Agriculture

and

Oregon Agricultural Experiment Station



Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State and local organizations.

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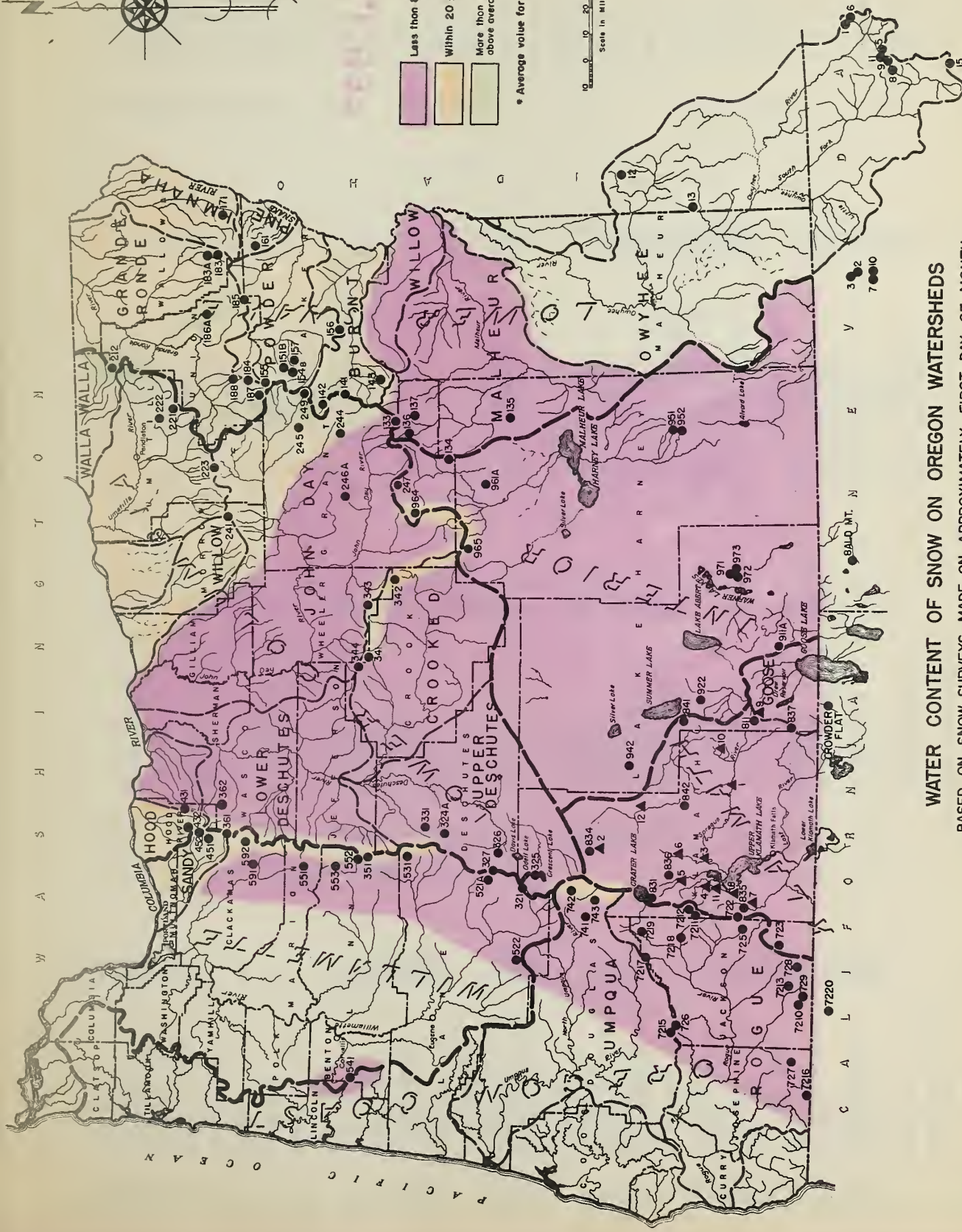
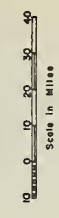
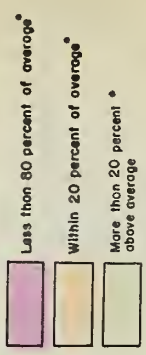
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FEDERAL-STATE COOPERATIVE
SNOW SURVEYS AND IRRIGATION WATER FORECASTS
FOR
OREGON

Report Prepared
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WATER CONTENT OF SNOW ON OREGON WATERSHEDS
BASED ON SNOW SURVEYS MADE ON APPROXIMATELY FIRST DAY OF MONTH
(Valley Lands Not Necessarily Included)

February 1, 1948

PRELIMINARY WATER SUPPLY OUTLOOK

The outlook for Oregon's 1948 water supplies varies widely through the state from "good" to critically short and is generally poorer than last year. Reservoir water supplies are "good" to "poor" with little "hold over" from 1947.

Mountain snow cover, as of February 1, is below average on 78 percent of all measured snow courses in Oregon and is very similar to conditions prevailing in the poor water year of 1944. Above normal snow accumulation during February and March is needed if all irrigated lands are to have a sufficient supply. Water content of the snow at elevations above 5000 feet is now 87 percent average and only 69 percent average below 5000 feet.

Greatly restricted water supplies are now indicated for irrigated lands in Rogue River, Silver Lake, Chewaucan River, Warner Valley, Silvies River, Crooked River and portions of the Klamath, Goose Lake and Malheur River basins. "Good" to "fair" supplies are to be expected in the Deschutes, Hood, Umatilla, Walla Walla, Grande Ronde, Wallowa, Powder and Burnt River Basins.

Watershed soils are well saturated and mostly not frozen under the snow. This condition favors a well sustained runoff from the spring snow-pack.

Reservoir storage reports are incomplete but show critical shortages in Unity, Fourmile Lake and Hyatt Prairie reservoirs with good supplies in the Deschutes reservoirs.



PRELIMINARY STREAMFLOW FORECASTS, February 1, 1948

The following preliminary runoff forecasts are based on present mountain snow cover and on the assumption that average February and March increase of snow cover will occur. Greater or less than average increase in mountain snow cover during the next two months will correspondingly modify these estimates:

BASIN AND STREAM	Apr.-Sept., inc. Streamflow in Thous. Ac.Ft.				
	Forecast	Measured Runoff		10-yr. avg.	
	1948	1947	1946	1945	1937-46
<u>NORTHCENTRAL OREGON</u>					
Hood River, west Fork near Dee	150.0	a	164.7	149.8	137.1
<u>UMATILLA-WALLA WALLA</u>					
Umatilla River at Pendleton	155.0	a	194.0	188.7	153.9
Walla Walla R., So. Fk. nr. Milton	71.0	a	75.0	69.8	62.7
<u>NORTHEASTERN OREGON</u>					
Wallowa River, E. Fk. plus Power Plant	10.9	a	13.3	10.9	10.7
Hurricane Cr. near Joseph	40.0	a	54.3	41.8	41.1
Lostine R. near Lostine	108.0	a	149.7	125.6	113.8
Bear Creek near Wallowa	55.0	a	83.4	65.5	63.6
Grande Ronde River Nr. LaGrande	170.0	a	179.6	168.4	155.8
<u>EASTERN OREGON</u>					
Strawberry Creek nr. Prairie City	6.0	a	9.9	8.0	7.8
Malheur R., Mid. Fk., nr. Drewsey	28.0	a	83.6	80.4	75.7
Malheur R., No. Fk., at Beulah	27.0	a	68.9	53.6	60.2
<u>HARNEY BASIN</u>					
Silvies River near Burns	37.7	a	99.6	98.6	88.4
<u>CENTRAL OREGON</u>					
Ochoco Reservoir Net Inflow	8.0	a	46.4	29.6	21.4
Crescent Lake Net Inflow	8.0	19.2	22.2	11.1	13.2
Odell Creek near Crescent	24.0	a	32.6	24.1	24.8
Tumalo Creek and Col. So. Canal	36.0	a	60.9	38.5	42.8
Squaw Creek near Sisters	41.0	a	63.5	38.4	44.9
<u>SOUTHCENTRAL OREGON</u>					
Deep Creek above Adel	35.0 ^b	a	57.6 ^b	70.2 ^b	61.3 ^b
<u>KLAMATH BASIN</u>					
Upper Klamath Lake Net Inflow	300.0	318.2	557.0	409.9	495.2
<u>SOUTHERN OREGON</u>					
Hyatt Prairie Reservoir Net Inflow	3.0	a	5.5	5.8	5.8
Fourmile Lake Net Inflow	5.7	a	8.7	7.3	6.9
Little Butte Creek, N. Fk., below Fish Lake (Natural Flow)	11.3	a	15.7	13.8	13.4
Rogue River No. Fk., above Prospect	250.0	a	370.4	295.4	293.4
Clearwater River above Trap Creek	53.0	a	65.7	55.5	57.6
No. Umpqua River below Lake Creek	133.0	a	178.0	148.6	147.6
No. Umpqua River at Toketee Falls	310.0	a	407.3	348.1	341.7
<u>WILLAMETTE VALEY</u>					
Willamette River Mid. Fk. at Lula	640.0	a	830.3	889.2	749.5
McKenzie River at McKenzie Bridge	480.0	a	595.2	532.9	516.4
McKenzie River near Vida	980.0	a	1227.8	1230.8	1107.8

a-1947 Discharge record not available, based on gauge rather than on stream



COMPARISON OF SNOW COVER AS OF FEBRUARY FIRST WITH THAT OF PREVIOUS YEARS

Snow-stored water now present above 5,000 feet:
 As percent of that present one month ago -- 129
 As percent of that present one year ago -- 39
 As percent of that present two years ago -- 51
 As percent of average -- 87

Snow-stored water now present from 2,000-5,000 feet:
 As percent of that present one month ago -- 146
 As percent of that present one year ago -- 32
 As percent of that present two years ago -- 33
 As percent of average -- 69

Snow water content on 58 percent of all measured courses is less than at this time in 1947, and in 93 percent of the comparisons is less than on about February 1, 1946. Snow water content on 78 percent of all measured courses is less than average.

Given below is a tabulation showing inches snow-stored water for the February 1 record period on eleven scattered snow courses of greatest record length.

Snow Water Content (Inches) as of About February 1												
River Basin	Deschutes	Umatilla	Walla Walla	Burnt River	Mallieure-John Day	Crooked Lake	Goose Lake	Klamath	Rogue	Klamath-Diamond Lake		
Snow Course	Three Creeks Meadows	Meacham	Toll-gate	Aneroid Lake	Blue Springs	Ochoco Mtns.	Quartz Mtn.	Chemult	Annie Spring			
Year												
1929	11.2	9.2	-	7.7	-	4.3	4.0	6.5	20.3	8.9		
1930	13.1	3.5	-	15.2	4.4	3.8	6.0	4.6	13.5	5.5		
1931	8.1	6.2	14.1	13.0	3.6	5.6	4.0	6.1	N.R.	8.4*		
1932	25.4	9.3	23.7	28.4	13.7	10.0	6.9	12.8	22.3	26.2		
1933	N.R.	5.6	N.R.	26.0	13.0	6.5	5.9	11.1	N.R.	27.5		
1934	8.5	0.5	12.5	N.R.	N.R.	N.R.	1.0	T	N.R.	5.6		
1935	15.8	5.6	18.2	21.2	11.0	9.4	7.7	8.6	33.4	7.6		
1936	N.R.	11.2	27.8	17.3	13.4	13.5	11.3	9.4	37.2	12.0		
1937	18.5	9.3	16.6	9.3	8.2	6.1	4.1	7.0	N.R.	15.6		
1938	8.2	2.1	9.7	21.0	9.0	N.R.	N.R.	4.1	22.3	7.9		
1939	10.1	4.0	14.1	13.4	7.4	5.7	2.2	5.3	26.5	12.2		
1940	4.3	2.3	5.9	16.5	3.6	1.8	T	5.5	20.5	3.1		
1941	6.3	4.0	14.1	19.3	13.4	8.6	5.0	8.1	56.8	10.5		
1942	6.6	3.5	7.0	22.4	6.8	5.9	3.8	6.3	18.1	6.8		
1943	N.R.	10.6	28.8	28.6	23.0	13.7	3.4	20.5	40.3	29.8		
1944	4.1	3.1	8.4	12.2	4.0	2.7	2.3	4.2	14.3	7.4		
1945	1.6	4.6	8.2	12.3	4.9	4.7	4.3	3.7	13.4	4.5		
1946	20.0	9.6	27.1	29.1	14.1	12.8	7.9	13.9	42.2**	26.1		
1947	10.5	4.4	16.7	25.9	9.3	2.8	2.6	1.0	20.5	9.3		
1948	6.4	6.5	20.5	20.0	7.0	6.0	T	4.1	18.4	11.8		
Greatest and least Feb. 1 water content are underscored.											***-(Jan.17)	
N.R.-No report											*-(Feb.15)	
T-Trace												

STATUS OF SNOW COVER AS OF FEBRUARY FIRST
Summary of Snow Survey Data
By Watersheds as of About February First

Stream Basin	Number of Snow Courses Averaged	Average Water Depth in Snow Cover (Inches)				Yrs. of Rec- ord	1943 Snow Water Depth (Inches) as Percent of that in		
		1948	1947	1946	Avg. past yrs. of record		1947	1946	Avg.
Owyhee River	1	5.1	6.6				77		
	1	5.1		15.4		(7)		33	
	1	5.1			8.6				59
Malheur River	3	3.3	3.9				85		
	3	3.3		8.8		(10-17)		38	
	3	3.3			5.8				57
Burnt River	3	5.8	5.3				109		
	3	5.8		9.5		(9-14)		61	
	3	5.8			6.3				92
Powder River	4	10.0	10.9				92		
	2	11.4		18.8		(8-11)		61	
	4	10.0			10.1				99
Pine Creek	1	15.2	18.0				84		
	1	15.2		30.2		(10)		50	
	1	15.2			18.9				80
Grande Ronde River	8	14.8	15.8				94		
	8	14.8		19.0		(5-19)		78	
	8	14.8			13.0				114
Walla Walla River	1	20.5	16.7				123		
	1	20.5		27.1		(16)		76	
	1	20.5			15.8				130
Umatilla River	3	10.8	8.1				133		
	3	10.8		15.6		(16-19)		69	
	3	10.8			9.0				120
Willow Creek	1	7.3	5.1				143		
	1	7.3		12.4		(18)		59	
	1	7.3			7.2				101
John Day River	8	6.5	6.1				106		
	7	6.2		11.2		(8-13)		55	
	8	6.5			6.6				98
Deschutes River	5	10.3	13.5				76		
	5	10.3		26.3		(2-17)		39	
	5	10.3			13.9				74
Crooked River	3	4.6	3.0				153		
	3	4.6		10.2		(10-18)		45	
	3	4.6			5.2				88



(Continued)

Stream Basin	Number of Snow Courses Averaged	Average Water Depth in Snow Cover (Inches)			Avg. Past Yrs. of Record	1948 Snow Water Yrs. Depth (Inches) of as Percent Rec- of that in		
		1948	1947	1946		ord	1947	1946 Avg.
Sandy River	2	24.6	32.0			77		
	2	24.6		45.5		(10)	54	
	2	24.6			21.2			116
Clackamas River	1	6.4	9.3			69		
	1	6.4		16.1		(10)	40	
	1	6.4			8.7			74
Willamette River	6	9.9	13.0			76		
	7	8.7		22.5		(4-17)	39	
	8	10.6			11.8			90
Harney Basin	4	3.6	2.7			133		
	4	3.6		7.6		(12-15)	47	
	4	3.6			4.4			82
Silver Lake Basin	1	0.0	T			0		
	1	0.0		4.9		(8)	0	
	1	0.0			2.6			0
Warner Lake	1	3.9	3.1			126		
	1	3.9		9.3		(9)	42	
	1	3.9			6.7			58
Umpqua River	2	10.4	7.3			142		
	2	10.4		27.2		(9-19)	38	
	2	10.4			12.2			85
Upper Rogue River	11	9.4	11.1			85		
	10	7.9		22.0		(2-16)	36	
	11	9.4			13.2			71
Applegate River	2	7.9	7.2			110		
	1	8.7		14.6		(6-12)	60	
	2	7.9			11.7			68
Klamath Lake Basin	21*	5.0	6.5			77		
	20*	4.1		14.8		(2-21)	28	
	21*	5.0			8.8			57
Goose Lake Basin	3*	2.0	3.2			62		
	3*	2.0		9.3		(9-18)	22	
	3*	2.0			5.7			35

*Including Copco water measurement stations.



STATUS OF RESERVOIR STORAGE, February 1, 1948

BASIN AND STREAM	RESERVOIR	USABLE CAPACITY (Thous. A.F.)	THOUSANDS ACRE FEET IN STORAGE ABOUT FEB. 1				
			1948	1947	1946	1945	10 year avg. 1937-46
UPPER COLUMBIA DRAINAGE							
LOWER SNAIL IN OREGON							
Owyhee	Antelope	36.5	N.R.	N.R.	0.0	3.2	3.6 ^d
	Owyhee	715.0	310.1	467.4	561.0	403.0	514.9
Malheur	Warm Springs	191.0	N.R.	96.3	81.2	35.3	88.6
	Agency Valley	60.0	N.R.	33.6	39.3	41.9	36.2
	Willow Creek	26.0	N.R.	N.R.	N.R.	10.6	4.4 ^c
Burnt	Unity	25.2	4.7	8.1	11.4	10.4	9.8 ^f
Powder	Thief Valley	17.4	N.R.	15.6	12.2	8.5	11.0
Grande Ronde	Wallowa Lake	40.9	N.R.	25.4	11.2	9.8	19.3
LOWER COLUMBIA DRAINAGE							
Umatilla	McKay	74.0	53.7	48.9	36.0	21.4	28.9
	Cold Springs	50.0	38.2	32.9	30.8	15.6	25.9
Deschutes	Ochoco	46.0	N.R.	25.0	36.3	1.1	14.8
	Crescent Lake	80.0	N.R.	49.0	30.1	31.0	32.9
	Crane Prairie	50.0	N.R.	41.4	36.7	24.2	30.7
	Wickiup	180.0	122.2	68.8	43.0	45.0	23.2 ^g
Willamette	Cottage Grove	30.1 ^b	0.3	0.0	0.0	0.0	0.0 ^g
	Fern Ridge	94.2 ^b	1.6	0.0	0.0	0.0	11.9 ^h
WEST COAST DRAINAGE							
Rogue	Fish Lake	7.7	3.2	4.0	3.7	3.2	4.3
	Fourmile Lake ^a	16.0	2.1	4.5	4.9	6.7	7.0
	Emigrant Gap	8.2	8.3	2.3	8.2	1.6	4.7
	Hyatt Prairie ^a	16.0	2.7	2.1	2.0	1.9	5.2
Klamath	Upper Klamath Lake-584.0 ^c	263.3	243.8	388.5	178.7	350.8	
	Gerber	94.0	20.9	29.2	31.6	34.2	39.1
	Clear Lake	440.2	145.1	203.2	252.2	227.8	204.5
Goose Lake	Cottonwood	4.1	N.R.	0.0	0.0	0.4	0.1 ⁱ
	Drew	62.5	N.R.	24.8	N.R.	28.5	34.7 ^j

N.R. - No Report

a - By ditch to Rogue River side
from Klamath drainage

b - Storage space reserved for flood control

c - Based on gage zero elevation of 4115.0

d - Excl. '43

e - Excl. '42, '44, '46

f - 1939-46

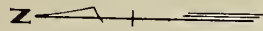
g - 1943-46

h - 1942-46

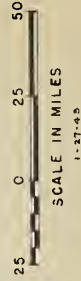
i - Excl. '37, '38, '42

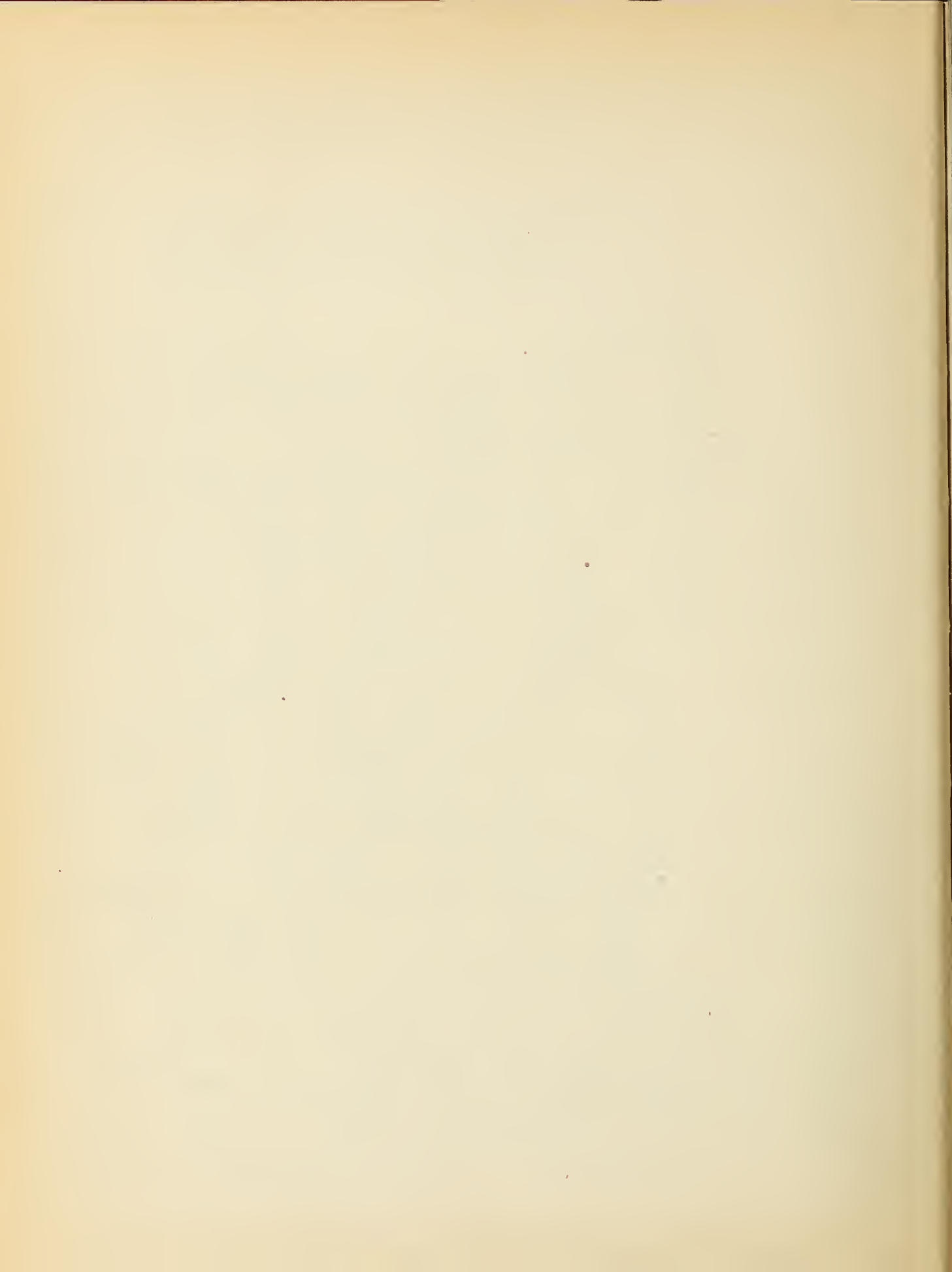
j - Excl. '46

IMPORTANT OREGON RESERVOIRS



RESERVOIR NAME	NUMBER
Agency Valley	1354
Antelope	1230
Clear Lake	823
Clear Lake	36R1
Cold Springs	22R1
Cottage Grove	5220
Cottonwood	8115
Crane Prairie	3220
Crescent Lake	322
Drew Creek	814
Emigrant Gap	7267
Fern Ridge	5413
Fish Lake	7237
Four Mile Lake	8321
Gerber	8215
Hyatt Prairie	8320
McKay	2231
Ochaca	3420
Owyhee	1234
Rock Creek	36R3
Thief Valley	1514
Thompson Valley	9411
Unity	1415
Upper Klamath Lake	832
Wallowa Lake	186
Worm Springs	1322
Wickiup	3137
Willow Creek No. 3	1323





VALLEY PRECIPITATION^a

DIVISION	CURRENT YEAR		LAST YEAR	
	Oct. 1, 1947 - Feb. 1, 1948		Oct. 1, 1946 - Feb. 1, 1947	
	P	D	P	D
Southeastern	3.4	-0.5	3.45	-0.71
Southcentral	6.0	-1.3	6.08	-1.50
Northcentral	7.2	+1.7	5.00	-0.72
Columbia River	8.2	+2.1	4.77	-1.34
Wallowa Mountains	6.3	-0.4	6.26	-0.08
Blue Mountains	8.8	+1.3	9.05	+0.63
Southern	13.4	+0.7	11.31	-1.49
Willamette Valley	33.4	+5.1	31.50	+3.35

P - Inches Precipitation

D - Inches Departure from Normal

<u>Southeastern</u> -	Southeastern Oregon range lands, Harney and Malheur Counties.
<u>Southcentral</u> -	Southcentral Oregon range lands, Lake County and Klamath County, except the Cascade Mountains.
<u>Northcentral</u> -	Northcentral Oregon wheat and range lands, Crook, Deschutes, Jefferson, Wheeler and part of Grant Counties.
<u>Columbia River</u> -	Columbia River area, wheat and range lands, Gilliam, Morrow, Sherman, Wasco, and part of Umatilla Counties.
<u>Wallowa Mountains</u> -	Wallowa Mountain area, forest and range lands, Wallowa and part of Baker County.
<u>Blue Mountains</u> -	Blue Mountain forest and range lands, Union and parts of Baker, Grant and Umatilla Counties.
<u>Southern</u> -	Southern Oregon irrigated section, Jackson and Josephine Counties.
<u>Willamette Valley</u> -	Parts of Polk, Benton, Yamhill, Washington, and Lane; all of Linn, Marion, Clackamas and Multnomah Counties.

a - Data furnished by U. S. Weather Bureau



OREGON SNOW SURVEYS, FEBRUARY, 1948

DRAINAGE BASIN and SNOW COURSE	LOCATION			SNOW COVER MEASUREMENTS								
	Number or State	Sec.	Twp.	Range	Elev.	Date of Survey	Snow Depth (In.)	Water Content (In.)		Years of Record	Av. Water Content (Inches)	
								1948	1947			

a - Partly Estimated

OREGON SNOW SURVEYS, FEBRUARY, 1948

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DRAINAGE BASIN and SNOW COURSE	LOCATION		SNOW COVER MEASUREMENTS						
	Number or State	Sec. Twp. Range Elev.	Date of Survey	Snow Depth (In.)	Water Content(In.)			Past Record Av. Water Content (Inches)	
					1948	1947	1946		
GRANDE RONDE RIVER									
Aneroid Lake No. 1	133	16 4S 45E 7480	1-31	60.3	20.0	25.9	29.1	18 13.8	
Aneroid Lake No. 2	133A	16 4S 45E 7000	1-31	49.1	16.5	20.5	23.3	6 17.6	
Anthony Lake	155	18 7S 37E 7125	1-30	50.5	18.0	26.0	27.8	8 18.4	
Beaver Reservoir	138	8 5S 37E 5340	1-23	29.3	8.6	7.3	8.7	9 7.8	
Camp Carson	187	33 6S 36E 5970	1-31	24.6	7.1	7.4	8.0	5 5.7	
Meacham	221	24&25 1S 35E 4300	1-27	17.8	6.5	4.4	9.6	19 5.7	
Moss Spring	136A	28 3S 41E 5350	1-30	59.8	21.5	17.3	13.7	10 13.3	
Tollgate	212	32 4N 38E 5070	1-27	55.8	20.5	16.7	27.1	16 15.8	
L O W E R C O L U M B I A D R A I N A G E									
WALLA WALLA RIVER									
Tollgate	212	32 4N 38E 5070	1-27	55.8	20.5	16.7	27.1	16 15.8	
UMATILLA RIVER									
Emigrant Springs	222	29 1N 35E 3925	1-27	14.1	5.4	3.3	10.2	19 5.5	
Meacham	221	24&25 1S 35E 4300	1-27	17.8	6.5	4.4	9.6	19 5.7	
Tollgate	212	32 4N 33E 5070	1-27	55.8	20.5	16.7	27.1	16 15.3	
WILLOW CREEK									
Arbuckle Mountain	241	33 4S 29E 5400	1-29	21.0	7.3	5.1	12.4	13 7.2	
JOHN DAY RIVER									
Arbuckle Mountain	241	33 4S 29E 5400	1-29	21.0	7.3	5.1	12.4	13 7.2	
Beech Creek Summit	246A	4 12S 30E 4300	1-27	9.2	2.5	1.8	7.4	11 3.8	

OREGON SNOW SURVEYS, FEBRUARY, 1948

DRAINAGE BASIN and SNOW COURSE	LOCATION		SNOW COVER MEASUREMENTS						
	Number or State	Sec. Twp. Range Elev.	Date of Survey	Snow Depth (In.)	Water Content (In.)			Past Record Years of Record	Av. Water Content (Inches)
					1948	1947	1946		
JOHN DAY RIVER (Cont'd)									
Blue Mountain Springs	133	21 15S 35E 5900	1-29	22.6	7.0	9.3	14.1	17	9.6
Blue Mountain Summit	141	6 12S 36E 5093	1-29	18.2	6.2	5.1	9.5	13	5.5
Gold Center	249	21 9S 36E 5340	1-29	22.7	3.5	5.7	-	8	6.8
Izee Summit	964	28 16S 29E 5293	1-29	19.0	6.2	3.7	10.7	12	5.6
Olive Lake	245	14 9S 33½E 6000	1-26	40.5	12.0	15.6	16.1	12	10.1
Starr Ridge	247B	20 15S 31E 5150	1-29	10.2	2.3	2.6	3.0	12	3.8
DESCHUTES RIVER									
Cascade Summit	321	7 23S 6E 4830	1-28	40.5	13.3	18.0	35.3	17	18.6
Crescent Lake	325	11 24S 6E 4760	1-28	11.0	4.9	4.2	19.2	12	8.1
Derr	343	14 13S 23E 5670	1-28	19.0	5.9	5.4	10.5	10	5.8
Hogg Pass	351	24 13S 7½E 4755	1-29	54.9	21.3	29.1	42.0	10	21.8
Marks Creek	344	25 12S 19E 4540	1-29	4.9	1.3	0.7	7.3	10	3.1
Ochoco Meadows	341	21 13S 20E 5200	1-31	18.8	6.0	2.8	12.8	18	6.6
Rock Creek	362	1 4S 10E 4200	1-29	15.3	5.0	5.6	14.7	2	10.2
Three Creek Meadows	331	13 17S 9E 5600	1-30	23.1	6.4	10.5	20.0	16	10.7
HOOD RIVER									
Tilly Jane - Mt. Hood	432	15 2S 9E 6000	2-1	48.8	18.4	New Snow Course			
SANDY RIVER									
Phlox Point - Mt. Hood	452	6 3S 9E 5600	2-3	92.4	36.4	49.2	63.0	10	31.7
Still Creek	451	25 3S 8½E 3700	2-3	35.9	12.7	14.9	28.0	10	10.3

OREGON SNOW SURVEYS, FEBRUARY, 1948

DRAINAGE BASIN and SNOW COURSE	LOCATION		SNOW COVER MEASUREMENTS									
	Number or State	Sec. Twp. Range	Elev.	Survey	Date of	Snow Depth (In.)	Water Content (In.)			Years of Record	Past Record	
							1948	1947	Same Approx. Date			
CLACKAMAS RIVER												
Peavine Ridge	591	14&15	6S	7E	3500	2-3	22.8	6.4	9.3	13.1	10	8.7
WILLAMETTE RIVER												
Breitenbush	551	21	9S	7E	2325	1-31	7.1	1.6	-	4.3	5	3.8
Cascade Summit	321	7	23S	6E	4880	1-28	40.5	13.8	13.0	35.3	17	13.6
Champion	522	12	23S	1E	4500	1-30	24.8	9.0	5.3	28.3	9	12.0
Hogg Pass	351	24	13S	7½E	4755	1-29	54.9	21.3	29.1	42.0	10	21.8
McKenzie	531	35	15S	7½E	4800	Abt. 2-1	65.0	24.0*	-	-	4	13.8
Marion Forks	553	28	11S	7E	2730	1-29	11.5	3.9	7.6	13.3	7	7.0
Mary's Peak	541	21	12S	7W	3620	1-27	4.4	1.8	2.9	8.5	8	4.6
Santiam Junction	552	14	13S	7E	3990	1-29	25.5	9.4	15.0	24.5	7	13.0
SILVER LAKE												
Silver Creek	942	25&26	29S	13E	4900	1-31	0.0	0.0	Trace	4.9	3	2.5
HARNEY BASIN												
Idylwild Camp	961A	33	20S	31E	5200	1-31	3.0	2.6	2.2	5.5	15	3.3
Izee Summit	964	28	16S	29E	5293	1-29	19.0	6.2	3.7	10.7	12	5.6
Rock Spring	134	23	18S	32E	5100	1-31	10.3	3.0	2.3	6.0	12	4.4
Starr Ridge	247B	20	15S	31E	5150	1-29	10.2	2.6	2.6	8.0	12	3.8

I N T E R I O R D R A I N A G E

* Telegraphic - subject to minor revisions

OREGON SNOW SURVEYS, FEBRUARY, 1948

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DRAINAGE BASIN and SNOW COURSE	LOCATION		SNOW COVER MEASUREMENTS							
	Number or State	Sec. Twp. Range Elev.	Date of Survey	Snow Depth (In.)	Water Content (In.)			Past Record		
					1948	1947	1946			
WARNER LAKE										
Canas Creek	911A	5 39S 21E 5720	1-28	9.8	3.9	3.1	9.3	9	6.7	
UMPQUA RIVER										
Champion	522	12 23S 1E 4500	1-30-	24.8	9.0	5.3	23.3	9	12.0	
Diamond Lake	743	29 27S 6E 5315	1-28	30.2	11.8	9.3	26.1	13	12.4	
ROGUE RIVER										
Annie Spring	931	19 31S 6E 6018	1-30	50.5	18.4	20.5	42.2 ^d	15	25.9	
Billie Creek Divide	722	30 36S 5E 5300	1-26	30.0	13.4	9.3	24.8	16	14.3	
Fish Lake	725	3 37S 4E 4865	1-23	10.4	4.6	6.0	16.3	14	8.6	
Hyatt Prairie Reservoir	723	15 39S 3E 4900	1-23	11.4	3.5	2.9	11.0	13	6.3	
Park Headquarters	938	8 31S 6E 6450	1-30	62.4	24.2	29.9	-	2	24.2	
Scragg Mountain (Calif.)	7220	9 47N 10W 6200	2-1	19.7	7.1	7.3	-	6	14.1	
Seven Lakes No. 1	7211	3 34S 5E 6800	1-30	41.9	15.2 ^a	21.1 ^a	48.0	3	25.3	
Seven Lakes No. 2	7212	26 33S 5E 6200	1-30	31.1	11.3	17.4 ^a	43.7	3	19.1	
Silver Burn	7219	30 30S 4E 5720	1-31	9.5	3.1	3.7	11.3	10	6.1	
Siskiyou Summit	723	17 40S 2E 4630	1-31	1.8	0.6	1.9	5.1	11	4.4	
South Fork Canal	7218	12 33S 3E 3500	1-31	0.0	0.0	2.3	2.4	10	1.7	
Wagner Butte	7213	1 40S 1W 6900	1-29	24.7	8.7	7.0	14.6	12	9.5	
KLAMATH LAKE BASIN										
Annie Spring	831	19 31S 6E 6013	1-30	50.5	18.4	20.5	42.2 ^d	15	25.9	
Beatty 2/	22	36S 12E 4300	1-31	0.0	0.0	1.0	0.3	20	0.8	
Billie Creek Divide	722	30 36S 5E 5300	1-26	30.0	13.4	9.8	24.3	13	14.3	
a-Estimated	17	d-January	2/	Water content determined by melting one measured sample - (California Oregon Power Company's Station)						

OREGON SNOW SURVEYS, FEBRUARY, 1948

DRAINAGE BASIN and SNOW COURSE		LOCATION				SNOW COVER MEASUREMENTS						
		Number or State	Sec.	Twp.	Range	Elev.	Survey	Date of	Snow Depth (In.)	Water Content (In.)		Past Record Years of Content
										1943	1947	
KLAMATH LAKE BASIN (Cont'd.)												
Bly 101 Ranch 2/		22	35S	14E	4300	1-31	0.0	0.0	0.8	1.2	21	1.9
Chemult No. 1	834	21	27S	8E	4760	1-31	10.1	4.1	1.0	13.9	11	7.2
Chiloquin 2/		34	34S	7E	4187	1-31	0.0	0.0	0.3	1.0 ^a	13	2.0
Crowder Flat (Calif.)		30	47N	11E	5200	1-23	0.0	0.0	0.6	5.0	3	2.8
Crystal 2/		26	34S	6E	4200	1-31	5.8	2.0	3.0	10.8	13	6.1
Fort Klamath 2/		22	33S	7 $\frac{1}{2}$ E	4150	1-31	0.0	0.0	1.1	1.8	21	3.7
Harriman Lodge 2/		3	36S	6E	4200	1-31	0.0	0.0	2.4	3.5	21	3.6
Hyatt Prairie Reservoir	723	15	39S	3E	4900	1-28	11.4	3.5	2.9	11.0	13	6.3
Kirk 2/		1	33S	7E	4533	1-31	2.5	0.9	1.9	11.0	21	5.1
Lake of the Woods No.1	835	11	37S	5E	4960	1-29	8.3	2.7	3.9	11.0	11	5.4
Park Headquarters	338	8	31S	6E	5450	1-30	62.4	24.2	29.9	-	2	24.2
Quartz Mountain	811	2	38S	16E	5320	1-31	T	T	2.6	7.9	13	4.9
Quartz Mountain 2/		33	37S	16E	5504	1-31	5.0	2.2	4.0	10.8	18	5.4
Seven Lakes No. 1	7211	3	34S	5E	6800	1-30	41.9	15.2 ^a	21.1 ^a	43.0	8	25.3
Seven Lakes No. 2	7212	26	33S	5E	6200	1-30	31.1	11.3	17.4 ^a	43.7	8	19.1
Sun Mountain	836	22	32S	7 $\frac{1}{2}$ E	5350	2-2	25.2	7.8	11.8	33.0	10	16.1
Taylor Butte	842	16	33S	11E	5100	1-30	0.0	0.0	0.6	3.4	11	3.4
Yamsey 2/		20	31S	11E	4600	1-31	0.0	0.0	0.0	7.0	17	2.0
GOOSE LAKE BASIN												
Camas Creek	911A	5	39S	21E	5720	1-28	9.8	3.9	3.1	9.3	9	6.7
Quartz Mountain	811	2	38S	16E	5320	1-31	T	T	2.6	7.9	13	4.9
Quartz Mountain 2/		33	37S	16E	5504	1-31	5.0	2.2	4.0	10.8	13	5.4

a - Estimated

2/- Water content determined by melting one measured sample (The California Oregon Power Company's Station)



The following organizations cooperate in the Oregon snow survey work:

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and corps of State Watermasters
Oregon State Highway Engineers

FEDERAL

Department of Agriculture
Forest Service
Soil Conservation Service
Department of Commerce
Weather Bureau
Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Indian Service
National Park Service
War Department
Army Engineer Corps

PUBLIC UTILITIES

California-Pacific Utilities Company
Portland General Electric Company
The California Oregon Power Company

MUNICIPALITIES

City of Baker
City of Corvallis
City of LaGrande
City of The Dalles

IRRIGATION DISTRICTS

Associated Ditch Companies
Central Oregon Irrigation District
Deschutes County Municipal Improvement District
East Fork Irrigation District
Grants Pass Irrigation District
Jordan Valley Irrigation District
Lakeview Water Users Incorporated
Medford Irrigation District
Ochoo Irrigation District
Rogue River Irrigation District
Talent Irrigation District
Vale-Oregon Irrigation District
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

Amalgamated Sugar Company
South Wasco Soil Conservation District
The Crag Rats



